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Self-Mutilation in a Male Adolescent Inpatient Population

A Senior Honors Thesis

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by

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Abstract

Although self-mutilation (SM) among adolescents has recently received increased scientific and public attention, most of this research has been conducted on females and community populations. The current study explored SM in a group of male adolescent psychiatric inpatients by comparing 42 13-to-18 year-old males hospitalized for SM to 42 clinical controls who were not hospitalized for SM. Using archival assessment data, annual rates of SM, age and ethnic characteristics and associations with family status, psychosocial functioning, diagnoses and stressful life events were examined. Results indicate the rates of male SM increased between 2000 and 2005. Most teens engaging in SM were 15-to-16 years old and Caucasian and were given a variety of psychiatric diagnoses. Compared to clinical controls, males endorsing SM reported less interpersonal conflict but fewer friends; were less likely to be diagnosed with conduct disorder but more likely to have major-depressive disorder. Across both groups, most adolescents did not live with their two-biological parents and experienced similar number of stressful life events 12-months prior to hospitalization. Findings, limitations and implications of the study are discussed.

Self-Mutilation in a Male Adolescent Inpatient Population

Self-Mutilation (SM) was defined by Favazza (1998) as the “deliberate, direct destruction or alteration of body tissue without the conscious suicidal intent” (p. 260). The prevalence of SM has increased remarkably since the 1960s (Suyemoto, 1998). Although recent rates of SM have increased, accounts of SM have been noted throughout history. In fact, the Bible is one of the first documentations of SM (Favazza, 1998): “And if your eye causes you to sin, pluck it out” (Mark 9:47, New American Bible, 1995). Current rates of SM are estimated to be 14-39% in the adolescent community (Nock & Prinstein, 2004) and as high as 61.2% among psychiatric adolescent inpatients (Nixon, Cloutier & Aggarwai, 2002).

In addition to the increase in prevalence, there has also been a significant rise in interest about SM in the scientific and public domains. A PsychINFO and MEDLINE search conducted by the authors revealed only 15 articles or book chapters on SM from 1980 to 1999, but over 30 citations between 2000 to 2004. A reflection of the increase in interest regarding SM by the general public is demonstrated by the number of books on the Internet book retailer Amazon.com. Sixteen books appear on Amazon.com with publication dates between 1980 and 1999, whereas eight books have already been published in the first four years of the 21st century. A variety of websites and self-help groups devoted to SM have also become more common on the Internet (e.g., “Focus Adolescent Services” [<http://focusas.com/SelfInjury.html>] and “Secret Shame” [<http://www.palace.net/~llama/psych/injury.html>]). Contemporary interest in SM has become so widespread that references to SM have appeared on daytime television shows (e.g., *Dr. Phil*) and in popular movies (e.g., *Girl Interrupted* and *Thirteen*). Ironically, although

increased media attention may have contributed to the growing public awareness of SM, it may also have played a more insidious “contagious” role in the number of adolescents engaging in SM.

Classification of SM

Despite its prevalence, SM only appears as a diagnostic symptom for one diagnosis, Borderline Personality Disorder [BPD], in the Diagnostic and Statistical Manual of Mental Disorder-Fourth Edition ([DSM-IV] American Psychiatric Association [APA], 1994). However, SM has been associated with several additional DSM-IV diagnoses, including Impulse Control Disorders (Favazza, 1998) and Post Traumatic Stress Disorder (PTSD: Strong, 1998). SM has been more specifically classified by Favazza (1998) who divided it into three types: Major, Stereotypic and Moderate SM. Major SM is described by severe but infrequent acts of bodily harm (e.g., limb amputation) whereas Stereotypic SM is characterized by repetitive and sometimes rhythmic behaviors (e.g., head banging). Moderate SM is the most common form of SM and consists of three subgroups: Compulsive, Episodic and Repetitive SM. Compulsive SM (e.g., skin picking) is usually a ritualistic act while Episodic SM (e.g., skin cutting) occurs in less frequent isolated incidents, but becomes Repetitive when an absolute fixation occurs.

Age of Onset and Gender Differences

Regarding age of onset, SM is typically reported to begin in adolescence (Nixon et al., 2002), particularly in the freshman year of high school (Kress, 2004). Most studies indicate the majority of teens who SM are female (Favazza, 1998). Rodham and Hawton (2005) found that females tend to explain SM as form of punishment or coping mechanism for cognitive dissonance. However, recent research suggests similar rates of SM amongst adolescent males (Hawton et al., 2004) who tend to use more violent methods of SM and therefore require medical

attention more often than females (Canetto, 1997 and Cantor, 2000 cited in Rodham et al., 2005). Differences between genders in reported rates of SM across studies may be due to the different definitions of SM (e.g., cutting vs. self-poisoning) and/or different samples (outpatients vs. inpatient).

Etiology of SM

Via a review of the literature, Suyemoto (1998) conceptualizes SM as a coping strategy that serves multiple functions and presented six functional models: the environmental model, the antisuicide model, the sexual model, the affect regulation model, the dissociation model, and the boundaries model. The environmental model suggests SM is initially learned and vicariously reinforced by familial modeling of abuse and maintained internally via feelings of relief and externally by family and friends. The antisuicide model explains SM as a compromise between the two competing drives of life and death and thus represents a replacement for death. According to the sexual model SM stems from conflicts over sexuality, menarche and menstruation. The affect regulation model views SM as a nonverbal way to express or manage anger, anxiety or pain that cannot be communicated verbally. The dissociation model suggests SM as a mechanism to terminate or cope with the emotional effects of dissociation. Finally, the boundaries model explains SM as way of separating oneself from others to protect the self from feeling engulfed or lost. According to more systematic research on the etiology of SM, it appears to serve the function of tension reduction (or affect regulation) and/or to communicate with others (Nixon et al., 2002; Nock and Prinstein, 2005).

In addition to the previous models, several risk factors have also been found to be associated with SM including: depression, anxiety, hopelessness, perfectionism, loneliness, tension reduction, impulsivity and social contagion (see Nock & Prinstein, 2004), childhood

physical and sexual abuse (Gratz, 2003), stressful life events (Hawton et al., 1999; Nixon et al., 2002), suicidal ideation and attempted suicide (Suyemoto, 1998) and severe psychopathology (Hawton, et al., 1999). However, as few studies of SM have included control groups it is not clear whether these risks are associated with SM per se or due to psychopathology in general.

More recently, Rodman et al, (2004) examined gender-specific risk factors and found females who engage in SM reported more feelings of depression, anxiety and impulsivity than males, whereas more males reported it as a consequence of receiving little attention. Risks for both genders included increased drug use, low self-esteem and family and friends engaging in SM (Rodham et al., 2005).

Reasons to Study SM

Due to the growing prevalence of SM, the increased scientific and public interest, its destructive nature and association with other clinical symptoms including suicidal behavior, additional research is crucial to the understanding, assessment, prevention and treatment of this relatively unexplored phenomenon. In particular, as most studies have included female samples, more research is required on males who SM and associated risk factors. Additionally, considering rates are as high as 61.2% in adolescent inpatients (Nixon et al., 2002), research on SM in this population is also crucial.

Current Study Hypotheses

As limited research exists on males and inpatients who SM the main purpose of this study was to explore one form of non-suicidal SM, intentional cutting of the body, in a group of male adolescent psychiatric inpatients. More specific study goals included: 1) An examination of annual rates of male adolescents hospitalized for SM between January 2000 and August 2005; 2) A description of age and ethnic characteristics of identified SM cases and 3) A comparison of the

family status, psychosocial functioning, diagnoses and stressful life events of identified SM cases to a clinical control group of males not hospitalized for SM (NSM).

Methods

Participants

Archival data was obtained from participants who were hospitalized in The OSU-Harding Child and Adolescent Inpatient Hospital between January 2000 and August 2005. Male adolescents, ages 13 to 18 ($M=15.4$, $SD=1.2$), who reported non-suicidal cutting as the reason for hospitalization were identified. A clinical control group of 42 male adolescents who reported no SM (NSM) were matched on age, race, and year of hospitalization.

Measures

Archival data included information from The Child Interview for Psychiatric Syndrome (ChIPS: Weller et al 1999). The ChIPS is a structured diagnostic interview for children ages six-to-18 years of age. Based on DSM-IV (APA, 1994) criteria, this interview assesses 19 psychiatric diagnoses, 13 psychosocial stressors, psychosocial functioning at home, school, and with peers and also gathers basic demographic information such as age, ethnicity and family status. The ChIPS has acceptable reliability and validity (Weller, Weller, Fristad, Rooney, & Schecter, 2000). All adolescents interviewed with the ChIPS were also asked why they had been hospitalized. The other measure used was the Adolescent Life Events Scale (ALES) developed by Compas, Davis, Forsyth & Wagner (1987). The ALES is a self-report questionnaire for 12-to-18 year-olds that assesses a variety of 60 stressful life events occurring at one, three and 12-months prior to admission.

Procedure

ChIPS were administered to adolescents by a trained psychometrist during admission to The OSU-Harding Child and Adolescent Inpatient Hospital. Demographic and clinical information from the ChIPS and ALES and the reason for hospitalization was incorporated into a psychological report and stored in a computer archive. Approximately 2000 inpatient psychological reports, archived between January 2000 and August 2005, were examined to identify male adolescents who endorsed non-suicidal SM as the reason for their hospitalization. A control group of 42 adolescent males who did not report SM as the reason for their hospitalization (NSM) was also identified and matched on age, ethnicity and year of hospitalization.

Results

Data was entered into and analyzed through the Statistical Package of Social Sciences (SPSS). Differences between the SM and NSM groups on categorical and dimensional variables were examined via one-way between groups ANOVA and chi square analyses, respectively.

Annual Rates of Adolescents Reporting SM

Results for annual rates of adolescents reporting SM as the reason for hospitalization showed a steady increase over a five-year period (see Figure 1). In 2000, only one adolescent inpatient male reported SM as the reason for hospitalization. The frequency increased slightly over the next three years: 2001 ($n = 2$), 2002 ($n = 7$), and 2003 ($n = 6$). However, in 2004 the number of males reporting SM rose to 16. A similarly trend has continued in 2005 with 10 males reporting SM in the first eight month of this year.

Age at Hospitalization

Results for the age at hospitalization (see Figure 2) shows that the majority of the 42 male adolescents hospitalized for SM were 15 years old ($n = 12$) and 16 years old ($n = 13$). The

remaining SM group included two 13 year-olds, eight 14 year-olds, six 17 year-olds and one 18 year-old. Regarding the ethnicity of the SM group, 90% of males reporting SM were Caucasian and the remaining 10% were either African-American, Hispanic, Asian or of mixed ethnicity.

Family Status

Family status (as reported on the ChIPS) was coded as either “living with two-biological parents” or “not living with two-biological parents” (i.e., single-parent, step-parent, adoptive or foster homes). No significant differences in family status were found for the SM and NSM groups [$\chi^2(1, N = 84) = .21, p = .65$]. However, the majority of the SM group (67%) and NSM group (62%) reported living in single-parent, step-parent, adoptive or foster homes.

Psychosocial Functioning

Home functioning.

Functioning at home was evaluated by three questions from the ChIPS: “How do you get along with...your mom [or other applicable female caregiver], your dad [or other applicable male caregiver] and your brother(s)/sister(s) [or other applicable sibling]?” For the purposes of this study, after identifying the SM and NSM groups, the adolescents’ verbal reports of conflict with regard to these questions were coded as either *Yes=1*, *Sometimes=2*, *No=3* separately for each variable: *Female Caregiver Conflict*, *Male Caregiver Conflict* and *Sibling Conflict*.

A significant difference was found between the SM ($M = 2.40, SD = 0.71$) and NSM ($M = 2.00, SD = 0.70$) groups for conflict with the female caretaker [$F(1, 76) = 5.57, p = .02$]. A trend towards significance was found for Sibling Conflict [$F(1, 56) = 3.56, p = .65$] for the SM ($M = 2.31, SD = 0.74$) and NSM ($M = 1.97, SD = 0.66$) groups. No significant differences [$F(1, 64) = 2.40, p = .13$] were found for conflict with the male caregiver between the SM ($M = 2.15, SD = 0.82$) and NSM ($M = 1.84, SD = 0.77$) groups.

School functioning.

Functioning at school was evaluated by three questions from the ChIPS: “How do you like school?” “Are classes easy or hard for you?” and “How do you get along with your teachers?” For the purposes of this study, after identifying the SM and NSM groups, the adolescents’ verbal reports were coded as either *Yes=1*, *Sometimes=2*, *No=3* separately for each variable: *Likes School*, *Finds Easy* and *Teacher Conflict*.

A significant difference was found between the SM ($M = 2.44$, $SD = 0.71$) and NSM ($M = 2.10$, $SD = 0.68$) groups for Teacher Conflict [$F(1, 78) = 4.68$, $p = .03$]. No significant differences [$F(1, 77) = 1.49$, $p = .70$] were found for Likes School between the SM ($M = 2.17$, $SD = 0.74$) and NSM ($M = 2.24$, $SD = 0.79$) groups. Similarly no significant differences [$F(1, 74) = 1.25$, $p = .73$] were found for Finds Easy between the SM ($M = 1.93$, $SD = 0.87$) and NSM ($M = 2.00$, $SD = 0.89$) groups.

Peer functioning.

Peer functioning was evaluated by three questions from the ChIPS: “How do you get along with other kids in your class?” “Do you get together with other kids to play/hang out together during the week/weekend” and “Do you have a best friend.” For the purposes of this study, after identifying the SM and NSM groups, the adolescents’ verbal reports were coded as either *Yes=1*, *Sometimes=2*, *No=3* separately for *Peer Conflict* and *Hangs Out With Other Kids* and *Yes=1* or *No=2* for *Best Friend*.

A trend towards significance was found between the SM ($M = 1.57$, $SD = 0.89$) and NSM ($M = 1.24$, $SD = 0.66$) groups for Hangs Out With Other Kids [$F(1, 82) = 3.83$, $p = .05$]. No significant differences [$F(1, 79) = 2.42$, $p = .62$] were found for Peer Conflict the SM ($M = 2.17$, $SD = 0.74$) and NSM ($M = 2.24$, $SD = 0.79$) groups. Similarly no significant differences [$\chi^2(1, N$

$= 84) = 1.51, p = .23]$ were found for Best Friend between the two groups with 67% and 71% of the SM and NSM groups reporting a best friend, respectively.

Psychiatric Diagnoses

ChIPS psychiatric diagnoses were coded for the absence or presence of 19 DSM-IV diagnoses. As shown in Table 1, adolescents in the SM group were given a variety of diagnoses, the most common ones being Major Depressive Disorder (MDD), $n = 36$ (86%); Oppositional Defiant Disorder (ODD), $n = 17$ (41%); Substance Abuse, $n = 13$ (31%); Conduct Disorder (CD), $n = 12$ (29%); Dysthymia, $n = 12$ (29%) and Mania, $n = 11$ (26%). However, only two significant differences were found between the SM and NSM groups. A significant [$\chi^2(1, N = 84) = 8.16, p = .00]$ difference was found between the number of adolescents in the SM ($n = 12$, 29%) and NSM ($n = 25$, 60%) groups who were diagnosed with Conduct Disorder. A significant [$\chi^2(1, N = 84) = 4.20, p = .04]$ difference was also found between the SM ($n = 36$, 86%) and NSM ($n = 28$, 67%) groups for the diagnosis of Major Depressive Disorder (MDD).

Stressful Life Events (SLE)

A total number of stressful life events variable (SLE) was computed by summing all of the adolescent's "yes" responses to the presence of the 60 SLE occurring at the three times periods making a possible total of 180 SLE during the year before admission. No significant [$F(1, 82) = .03, p = .86]$ differences for SLE were found between the SM ($M = 10.83, SD = 5.13$) and NSM ($M = 10.64, SD = 4.33$) groups.

Discussion

Summary of Findings

Annual rates of male adolescents hospitalized for non-suicidal SM increased between 2000 and 2005. The majority of male adolescents hospitalized for SM were 15-to-16 years of age, Caucasian and not living with two-biological parents. They were also diagnosed with a variety of disorders including MDD, ODD, Substance Abuse, CD; Dysthymia and Mania and reported an average of 10 SLE during the year preceding admission. Compared to a clinical control group not hospitalized for SM (NSM), male teens who endorsed SM were less likely to report conflict with their female caregiver, siblings and teachers; more likely to report fewer friends; less likely to be diagnosed with CD and more likely to be diagnosed with MDD. Both the SM and NSM groups were similar in terms of family status, conflict with a male caregiver, liking school, finding school easy, peer conflict, having a best friend and SLE experienced during the year preceding admission.

These results are compatible with previous findings that suggest SM usually begins around mid-adolescence (Kress, 2004) and is associated with several risk factors including depression, anxiety, hopelessness, loneliness, tension reduction, impulsivity (see Nock & Prinstein, 2004), stressful life events (Hawton et al., 1999; Nixon et al., 2002), substance abuse (Rodham et al., 2005) and severe psychopathology (Hawton, et al., 1999). The majority of adolescent males who reported SM were also Caucasian, which has not been previously reported. Since the study compared a SM group to a NSM clinical control group, it was found that most of these risks were not specific to SM but due to psychopathology in general. This does not mean that these risks are not involved in causing or maintaining SM but that they are not critical in influencing whether an adolescent male engages in SM or not.

In terms of more specific risks, adolescent males who engaged in SM also tended to report less external interpersonal conflict with female caregivers, sibling and teachers; fewer

severe externalizing problems; and fewer friends but more difficulties with MDD. These results suggest that for these male adolescent inpatients SM may serve an affect regulation function and allow them to nonverbally express or manage anger, anxiety or pain that cannot be communicated verbally (Suyemoto, 1998; Nixon et al., 2002; Nock and Prinstein, 2005).

Limitations of Study

The major limitation of this study was that we did not use a specific measure of SM but relied on whether adolescent male inpatient reported SM as the reason for hospitalization. This method may have underestimated the rates of SM reported by male adolescents and even the associated general and specific risks. In addition, although descriptive results indicate the majority of adolescent males in the SM group were Caucasian and between 15 and 16 years-old, since statistics on the ethnicity and age of all adolescent males admitted to the unit between 2000 and 2005 have not yet been examined, it is not clear whether these findings are an accurate reflection of adolescent males who engage in SM or due to unequal base-rates. Similarly, since the study did not compare our SM group to a matched sample of female adolescents who SM, it is not known whether any of these risks are gender-specific.

Clinical Implications of Study

Despite these limitations, the current study is one of few that has examined inpatient male adolescents who SM. The dramatic five-year increase in males reporting SM as the reason for hospitalization suggests the need for additional assessment, psychoeducational, prevention and treatment services specific to this problem. Currently, The OSU-Harding Child and Adolescent Inpatient Hospital does not specifically assess for SM for male or female patients but our results indicate a significant need to do so. Results also suggest that Caucasian 15-16- year-olds who are not living with their two-biological parents and who are experiencing a variety of psychiatric

problems are at risk for SM and efforts are needed to identify and prevent the development of SM in these adolescents. More specifically, since findings support an affect regulation model of SM, clinical intervention may be most effective in teaching inpatient adolescent males more productive skills to regulate their affect.

Future Research

To better understand, identify, assess, treat and prevent SM amongst males, more research is required on these adolescents in the inpatient and outpatient setting and in the community in general. Designs are also needed that use control groups and compare males who engage in SM to females to identify more specific risks. As few reliable and valid assessment measures of SM exist, and such measures are vital in terms of identifying cases and measuring treatment outcome research, this is a key area for future research.

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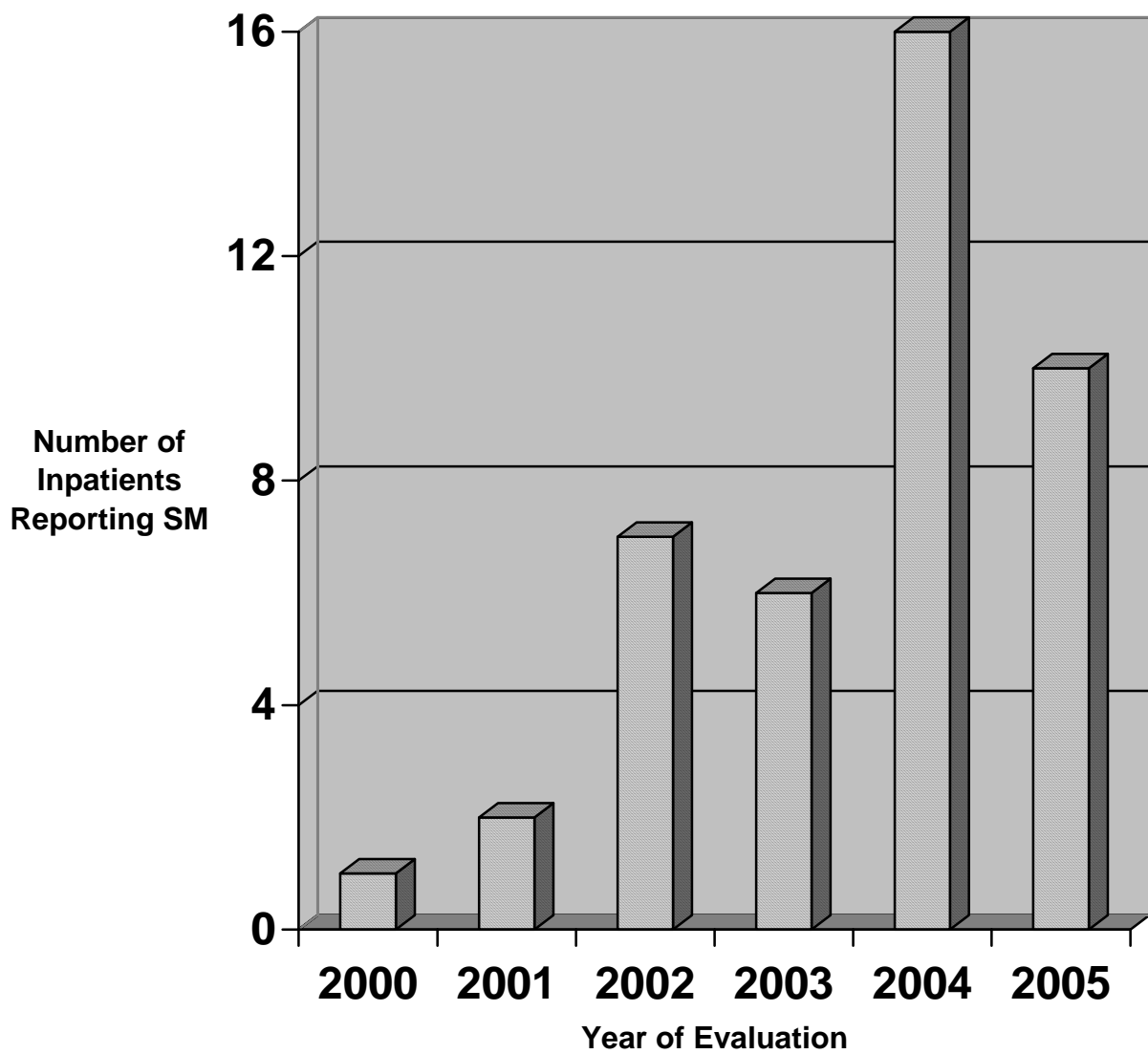
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Figure Captions

Figure 1. Number of inpatients reporting SM as reason for hospitalization from 2000 to 2005 (August through September).

Figure 2. Age of inpatients reporting SM at initial evaluation.



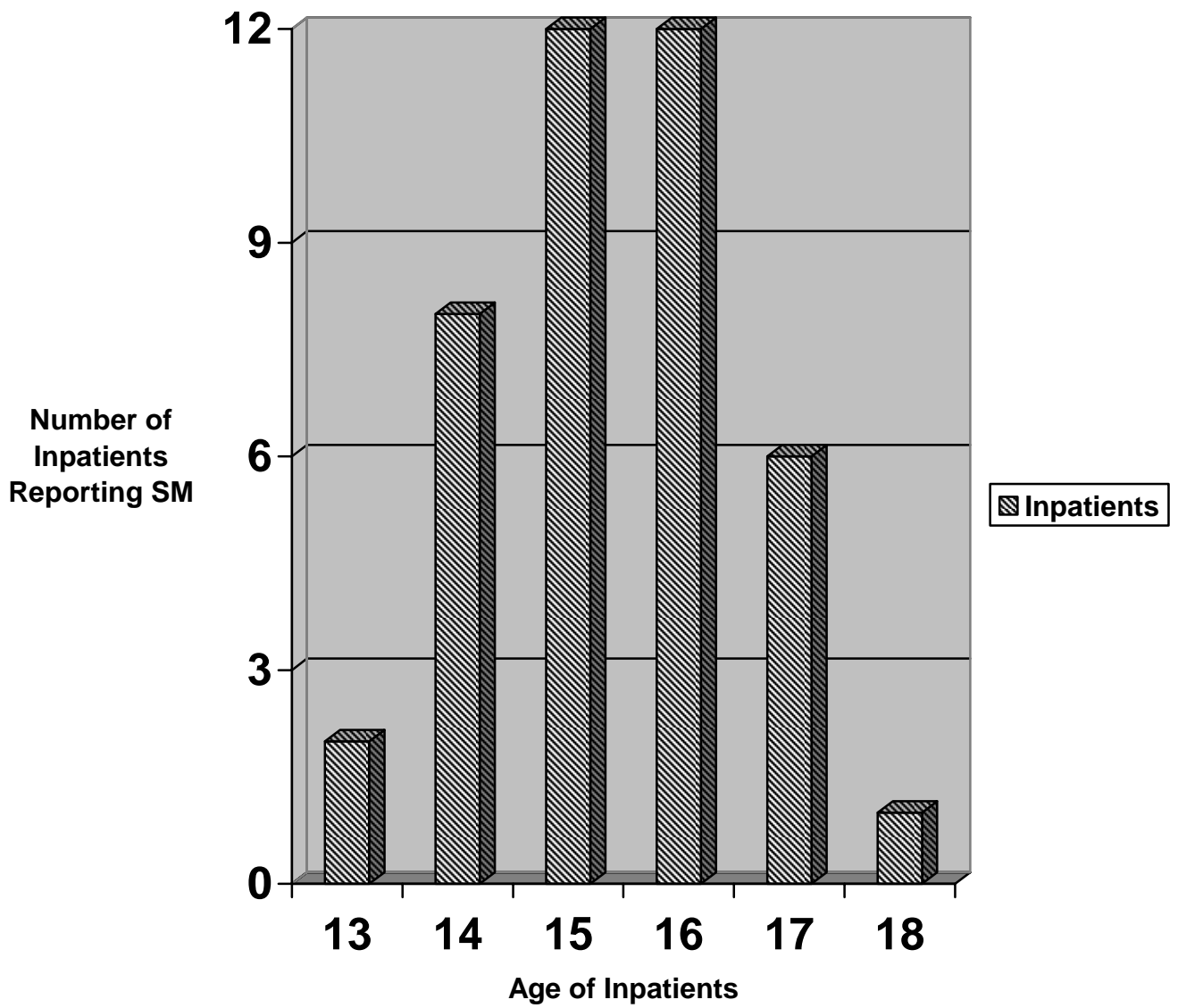


Table 1

Psychiatric Diagnoses of the Self-Mutilation (SM) and Non-Self-Mutilation (NSM) Groups

Diagnoses	SM	NSM
Attention-Deficit/Hyperactivity	N = 9 (21.4%)	N = 17 (40.5%)
Oppositional Defiant Disorder	N = 17 (40.5%)	N = 22 (52.3 %)
Conduct Disorder	N = 12 (28.6%)	N = 25 (59.5%)
Substance Abuse	N = 13 (30.9%)	N = 16 (38%)
Social Phobia	N = 2 (4.7%)	N = 6 (14.2%)
Separation Anxiety Disorder	N = 2 (4.7%)	N = 2 (4.7%)
Generalized Anxiety Disorder	N = 7 (16.6%)	N = 7 (16.6%)
Obsessive Compulsive Disorder	N = 1 (2.3 %)	N = 1 (2.3%)
Post-Traumatic Stress Disorder	N = 5 (11.9%)	N = 2 (4.7%)
Specific Phobia	N = 4 (9.5%)	N = 2 (4.7%)
Anorexia	N = 0 (0%)	N = 0 (0%)
Bulimia	N = 3 (97.1%)	N = 0 (0 %)
Major Depressive Disorder	N = 36 (85.7%)	N = 28 (66.6%)
Dysthymia	N = 12 (28.5%)	N = 30 (23.8%)
Hypomania	N = 2 (4.7%)	N = 0 (0%)
Mania	N = 11 (26.1%)	N = 12 (28.5%)
Enuresis	N = 0 (0%)	N = 1 (2.3%)

Encopresis	N = 0 (0 %)	N = 0 (0%)
Acute Stress Disorder	N = 0 (0%)	N = 0 (0%)